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REMARKS

Claims 1-12 remain in the application.

The specification is amended to correct minor typographical errors and proposed amendments to the drawings are attached. No new matter is added by the amendments to the specification, the drawings and the claims.

In the Final Office Action, dated April 6, 2004, the Examiner noted that the January 8, 2004 amendment to the specification (page 3, line 12) by adding reference numerals 16a fails to meet the amendment requirement because the changes do not show as being underlined. Applicants submit herewith a replacement paragraph having the reference numeral 16a added in two places as indicated by the underlining.

The Drawings

The Examiner approved the proposed drawings correction and/or the proposed substitute sheets of drawings filed on January 08, 2004. However, the Examiner stated that the drawings are objected to because reference characters "4" and "5" appear to designate to the same structure and reference characters "16" "16a", and "17" now appear to designate to the same structure (See Figure 1) and, further, reference numeral "9" is missing a lead line that connects to the part to which it refers.

Attached is a copy of Fig. 1 with new proposed amendments marked thereon. The reference numeral 4 has an arrowhead terminating adjacent to the exterior surface of the linear rail that is formed with a head body 5, a web 6 and extensions 7. The lead lines for the body 5, the vertical web 6 and the horizontal extensions 7 terminate inside the rail 4 and do not have arrowheads. Clearly, the reference numeral 4 designates the entire rail and the reference numeral 5 designates only the head body of the rail 4.

The reference numeral 16 has an arrowhead terminating adjacent to the exterior surface of the magnetic way or magnetic track. The reference numeral 16a has been repositioned with a lead line that terminates in the lower portion of the magnetic way 16 to designate a magnet assembly. A similar construction is shown in Figs. 6 and 7. The magnet assembly 16a extends downwardly through a recess 17 formed in the flat plate 3. The lead line for the reference numeral 17 has been extended to a side wall of the recess. Thus, the magnet assembly 16a is part of the magnetic way 16 and the recess 17 is part of the flat plate 3.

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Also attached is a copy of Fig. 3 with proposed amendments marked thereon. Arrowheads have been added to the lead lines for the reference numerals 8 and 8' and the reference numeral 4 has been added to identify the linear rail.

Applicants believe that the proposed drawing amendments overcome the Examiner's objections, but would be pleased to consider any suggestion the Examiner has to improve the drawings.

The Specification

The Examiner objected to the disclosure because of the following informalities: on page 3, lines 34, the statement that connector "9" has a C-profile is incorrect since bracket "8" referenced in Figure 1 is showing as having a C-profile.

As shown in amended Fig. 1, the connector 9 has a C-profile and is one component of the bracket 8 that also includes the support block 10. Thus, the description of the connector 9 on page 3 is correct.

The Claims

The Examiner rejected Claims 1-12 under 35 U.S.C. § 103(a) as being unpatentable over the U.S. Patent No. 4,272,923 issued to Anderson in view of the U.S. Patent No. 6,289,643 issued to Bonar. The Examiner stated that Anderson discloses a door suspension system comprising a rail support (32) attached to a door frame (34) and located above a doorway opening, the rail support having a plate attached to an elongated rail that has a substantially cylindrical body (28) and a web (30) attached therewith, the rail support attached to the elongated rail by connectors (66 and 62) that has a substantially C-profile bushing (62) embracing the rail support, the elongated rail is mounted to a cylindrical shaped bearing (74) that positions in an opening of a support block (76), at least two brackets (38, 44) each having a connector of a support piece extending perpendicular to the bracket and connected to a rigid plate of the mounting block, the bracket with the support piece is attached to a door (16) by a connector (78). The Examiner noted that the door system of Anderson is not driven by an electromagnetic linear motor.

The Examiner further stated, however, Bonar teaches a sliding door that opens by an electromagnetic linear motor with a support piece (31) having a connecting means (33) connecting to a door (32) and a groove on a support piece that supports an elongated magnetic

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way (69) and a primary (66, 67) of a linear motor thereon. See Figures 4 and 10. (Note that Bonar teach a load bearing header that has a linear motor (65) therein and is driven by electricity source and magnet (69) with no moving parts to reduce sound and lower service requirements. (See column 3, lines 32-33, column 4, lines 33-65 and column 5, lines 1-7.) The elongated magnetic way of Bonar is spaced apart between a support piece and rigid plates (27, 28) of a support block (13). The rigid plates are attached to the support block by fasteners (19). See Figure 10. According to the Examiner, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide between the support piece and rigid plate of Anderson with electromagnetic way and a primary of a linear motor thereof as taught by Bonar in order to have a sliding door that operates with no moving parts to reduce sound and to transfer a partial weight of the door upper part to a lower part of the door and sub-floor. With respect to claims 5 and 6, since there is no significant importance to the invention of where the magnetic way or the primary is mounted to the rigid plate or the support piece, it would have been an obvious matter of choice of design at the time the invention was made to provide either the support piece or the rigid plate with either the magnetic way or the primary for the operation of the door thus producing no new and unexpected results. With respect to the materials of neodymium and ferrite of the earth elements that are available and well known in the art of magnet per se. Accordingly, it would have been obvious to one of ordinary skill in the art as a matter of engineering design choice to utilize the available earth elements of neodymium and ferrite elements to manufacturing permanent magnet therefrom because it is well within the level of skill in the art to utilize the known materials accordingly to the elements properties for its suitability of intended use, i.e., neodymium and ferrite are well known to have high conductive properties and they often use in forming a metal for a desire of conductive purpose.

With respect to Applicants' previous argument that Bonar fails to teach "a door is attached to and suspended by said connection means, said attraction force cancels at least partially a weight of the door", the Examiner stated that it should be noted that Figure 10 of Bonar clearly illustrates a door is attached to and suspended by the connection means (31 and 33) and that the attraction force with the connection clearly cancels at least a weight of the door since the door is hanging from the connection means such that the entire weight of the door is not support by a bottom rail. Further, it should be noted that Bonar has been applied for the teaching

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of an electromagnetic linear motor and obviousness cannot be established by attacking references individually when a rejection is based on a combination of references.

Applicants are not attacking the references individually. The Anderson patent fails to show or suggest the claimed linear motor primary generating a magnetic attraction force that cancels at least partially a weight of the door. The construction of the supports for the top and bottom of the Anderson vehicle sliding door prevents any vertical movement of the door. Thus, the entire weight of the door is mechanically supported.

The Bonar patent shows a residential building sliding door also mounted in such a manner that there is no vertical movement of the door just like the Anderson door. The Bonar linear motor has a U-shaped magnet (69) that extends vertically on opposite sides of the center members (67) so that the magnetic forces generated by the magnet extend in a horizontal plane. The door (32) is attached to the hanger bracket (33) that is attached to the magnet support bracket (31) that is attached to the wheel (34) that is trapped in the track (29). There is no vertical magnetic component generated that could support the weight of the door (32) even if it were free to move vertically which it is not.

Even if the linear motor used in the Bonar sliding door assembly could be added to the Anderson vehicle door as suggested by the Examiner, such a combination would not function in the manner recited by Applicants' Claims 1-12 whereby a magnetic attraction force between the magnetic way and the linear motor primary cancels at least partially a weight of the door. Neither the Anderson patent, nor the Bonar patent, nor any combination thereof generates a vertical magnetic component that could support a door and both patents show doors that are mechanically supported with no vertical movement possible.

In view of the amendments to the drawing and the above arguments, Applicants believe that the claims of record now define patentable subject matter over the art of record. Accordingly, an early Notice of Allowance is respectfully requested.